Introduction

Wisp theory is unique and it explains the fundamental properties of nature in a clear and simple way.

In 1978 I had concluded that matter could not possibly be a hard 'something' in a space that was empty, simply because force needs a medium in which to propagate.

Fifteen years later, on 11 December 1993 and quite by chance a simple thought occurred to me:

- Fractals form in 'full' space, creating particles that have empty space at their centres.

I knew immediately that this was the correct answer to the mystery of the composition of matter.

Our senses convince us that matter is hard and that space is empty. Even the great Sir Isaac Newton held this view. In his treatise *Opticks*, published in 1704, he wrote in Query 31 about matter being solid, very hard and unbreakable. But our senses deceive us: the reverse is in fact the truth. Reality is effectively a 'photographic negative' of what we perceive.

Empty space is not void, it is full of wisps (the smallest fundamental particles in nature) and hence full of mass, but its mass lies dormant, and only manifests itself when it is disturbed. Disturbances create particles – fractal shapes – which lock quantities of wisps together, giving particles unique masses.

Wisp space is an ether medium by definition, but it differs from conventional notions, in that matter does not pass through it, but is instead, a part of it. Matter and space are essentially made from the same substance – wisps.

Our understanding of the nature of wisp space will help us visualise how mass and energy interchange in accordance with Einstein's famous equation, $E = mc^2$.

Wisp theory is able to resolve two great mysteries of physics:

- How do particles get their masses?
- What causes gravity?

Answering these questions challenges Einstein's special theory of relativity – a fundamental pillar of modern physics.

However, you are advised to keep an open mind when reading this book as it contains many new unproven concepts. My hope is that theoretical and experimental physicists will consider wisp theory and put it to the test. I have included tests in the appendices that challenge the predictions of special relativity.

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